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(FILE 'HOME' ENTERED AT 22:33:17 ON 27 DEC 2007)
FILE 'REGISTRY' ENTERED AT 22:33:26 ON 27 DEC 2007

L1 2 S 85-85-8 OR 1141-59-9
SEL NAME L1
L2 8 S 75-24-1 OR 97-93-8 OR 557-20-0 OR 923-34-2 OR 1115-99-7 OR 1445-79-0 OR 3385-78-2 OR 7783-82-6
FILE 'CA' ENTERED AT 22:35:11 ON 27 DEC 2007
L3 42463 S L1 OR E1-20 (PAN OR PAR OR 1-(PYRIDIN-2-AZO)-2-NAPHTHOL OR 1-(2-PYRIDYLAZO)-2-HYDROXYNAPHTHALENE OR 1-(2-PYRIDYLAZO)-2-NAPHTHOL OR 1-(2-PYRIDYLAZO)-2,4-DIHYDROXYBENZENE OR 1-(2-PYRIDYLAZO)NAPHTHOL-2 OR 1-(2'-PYRIDYLAZO)-2-NAPHTHOL OR 1,3-DIHYDROXY-4-(2'-PYRIDYLAZO)BENZENE OR 2-HYDROXY-1-(PYRIDIN-2-YLDIAZENYL)NAPHTHALENE OR 2-HYDROXY-1-(2-PYRIDYLAZO)NAPHTHALENE OR 4-(2-PYRIDINYLAZO)-1,3-BENZENEDIOL OR 4-(2-PYRIDINYLAZO)-1,3-DIHYDROXYBENZENE OR 4-(2-PYRIDINYLAZO)RESORCINOL OR 4-(2-PYRIDYLAZO)-1,3-BENZENEDIOL OR 4-(2-PYRIDYLAZO)RESORCINOL)
L4 32946 S L2 OR TRIMETHYLALUMINUM OR TRIETHYLALUMINUM OR DIETHYLZINC OR TRIETHYLINDIUM OR TRIETHYLGALLIUM OR TRIMETHYLGALLIUM OR TRIMETHYLINDIUM OR TUNGSTEN HEXAFLUORIDE
L5 10 S L3 AND L4
L6 683 S INDICATOR(2A) (TUBE OR COLUMN) OR LENGTH(2A) STAIN
L7 5 S L3 AND L6
L8 0 S L4 AND L6
L9 324 S L4(5A) (ANALY OR DETECT? OR DETERMIN? OR MEASUR? OR MONITOR? OR TEST? OR QUANTITAT? OR QUANTIF? OR QUANTIZ?)
L10 13 S L9 AND(COLORIMET? OR INDICATOR OR DYE)
L11 392 S L3(5A) (SILICA OR GEL OR CELLULO?)
L12 29 S L11 AND (L6 OR COLORIMET? OR INDICATOR OR DYE)
L13 53 S L5,L7,L10,L12

=> d bib,ab,kwic 113 1-53

L13 ANSWER 14 OF 53 CA COPYRIGHT 2007 ACS on STN
AN 133:144201 CA
TI Xerogels modified with **1-(2-pyridylazo)-2-naphthol** and dimethylglyoxime: **indicator tubes** for determining nickel
AU Azarova, Zh. M.; Morosanova, E. I.; Zolotov, Yu. A.
CS Department of Chemistry, Moscow State University, Moscow, 119899, Russia
SO Journal of Analytical Chemistry (Translation of Zhurnal Analiticheskoi Khimii) (2000), 55(7), 641-644
AB A simple and rapid sol-gel method was proposed for prepg. xerogels modified with **1-(2-pyridylazo)-2-naphthol** and dimethylglyoxime. Reactions between nickel and xerogels modified with **1-(2-pyridylazo)-2-naphthol** and dimethylglyoxime were studied by solid-phase spectrophotometry, and the optimal conditions were found. Procedures for detg. nickel in soln. by solid-phase spectrophotometry and tests based on **indicator tubes** contg. powd. xerogel modified with **1-(2-pyridylazo)-2-naphthol** were developed. The anal. ranges for nickel in the above methods were 0.1-2 and 0.2-30 mg/L, resp. The interference from cobalt(II) was eliminated by its adsorption on hydrophobic C16 and Cphenyl **silica gels** modified with **1-(2-pyridylazo)-2-naphthol**. The

interference of copper(II) and iron(III) was eliminated by the addn. of a mixt. of Na₂S₂O₃ and NH₄F.

L13 ANSWER 15 OF 53 CA COPYRIGHT 2007 ACS on STN
AN 133:26239 CA
TI Xerogels doped with **1-(2-pyridylazo)-2-naphthol** and xylenol orange: **indicator tubes** and **indicator** powders for determining copper(II) and iron(III) in solution
AU Morosanova, E. I.; Velikorodnyi, A. A.; Nikulin, I. V.; Puganova, E. A.; Zolotov, Yu. A.
CS Department of Chemistry, Moscow State University, Moscow, 119899, Russia
SO Journal of Analytical Chemistry (Translation of Zhurnal Analiticheskoi Khimii) (2000), 55(5), 486-491
AB SiO₂-based xerogels doped with **1-(2-pyridylazo)-2-naphthol** and Xylenol Orange were prepd. The xerogels differ in the sp. surface and the reagent concn. Modified xerogels were used as indicator powders for detg. Cu(II) and Fe(III) using **indicator tubes**. The effects of the reagent concn. in the indicator powder and its sp. surface on the length of the colored zone were studied. **Indicator tubes** were developed for detg. 0.3-300.0 mg/L Cu(II) and 1.0-120.0 mg/L Fe(III) in solns. The results of detg. Cu(II) in plant mineral food and Fe(III) in natural waters and ashed milk powder are presented.

L13 ANSWER 16 OF 53 CA COPYRIGHT 2007 ACS on STN
AN 131:222720 CA
TI Agent for detection of organometallic chemical compounds
IN Nakajima, Akiko; Endo, Fumiyoshi; Kozeki, Shuichi
PA Nippon Oxygen Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
PI JP 11264816 A 19990928 JP 1998-69096 19980318
PRAI JP 1998-69096 19980318
AB The title agent is used for detection of the leaks of organometallic compds. used in semiconductor manufg. The agent is made by loading coloring components, xylenol orange and CuCl₂, on silica gel support followed by vacuum drying and packing into a glass tube of 43 mm diam. While contacting with organometallic compds. the agent color turns into purple or gray from yellow.
IT 681-84-5, Tetramethoxysilane **3385-78-2, Trimethylindium** 4262-43-5, tert-Butylarsine (agent for **detection** of organometallic chem. compds. in semiconductor manufg.)

L13 ANSWER 17 OF 53 CA COPYRIGHT 2007 ACS on STN
AN 131:222719 CA
TI Agent for detection of organometallic chemical compounds
IN Nakajima, Akiko; Endo, Fumiyoshi; Kozeki, Shuichi
PA Nippon Oxygen Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
PI JP 11264815 A 19990928 JP 1998-67389 19980317
PRAI JP 1998-67389 19980317
AB The title agent is used for detection of leaks of organometallic chem. compds. used in semiconductor manufg. The agent is made by supporting a coloring component, phenosafranine, on silica gel with 0.1-0.5 (wt)% followed by vacuum drying and packing into a glass tube. While

contacting with organometallic compds. the pink color of the agent turns into purple. The agent is characterized by having no effect from ammonia which allows the detection of organometallic compds. in the presence of ammonia.

IT 681-84-5, Tetramethoxysilane **3385-78-2, Trimethylindium** 4262-43-5, Tert-Butylarsine 7664-41-7, Ammonia, analysis (agent for **detection** of organometallic chem. compds.)

L13 ANSWER 22 OF 53 CA COPYRIGHT 2007 ACS on STN

AN 125:47867 CA

TI Bismuth chloride-based detecting agent for toxic gas

IN Sugimori, Yoshiaki; Watanabe, Tadaharu

PA Nippon Oxygen Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

PI JP 08105879 A 19960423 JP 1994-242623

19941006

PRAI JP 1994-242623 19941006

AB The detecting agent contains Bi chloride and an acidic or basic **indicator**. The detecting agent is useful for detection of toxic (waste) gases treated in manufg. semiconductors.

IT **75-24-1, Trimethylaluminum** 75-50-3, Trimethylamine, 4262-43-5, tert-Butylarsine 10294-34-5, Boron trichloride (bismuth chloride-based **detecting** agent for toxic gas)

IT 77-09-8, Phenolphthalein 547-58-0, Methylorange (color **indicator**; bismuth chloride-based detecting agent for toxic gas)

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STN INTERNATIONAL LOGOFF AT 22:45:10 ON 27 DEC 2007

=> d his

(FILE 'HOME' ENTERED AT 17:25:51 ON 27 DEC 2007)

FILE 'REGISTRY' ENTERED AT 17:26:04 ON 27 DEC 2007

L1 464 S PYRIDYLAZO

L2 303 S L1 AND(PHENOL? OR NAPHTH? OR RESORCIN? OR ACENAPHTH? OR BENZENEDIOL OR CRESOL?)

FILE 'CA' ENTERED AT 17:36:23 ON 27 DEC 2007

L3 5581 S L2 OR PYRIDYLAZO?

L4 17 S L3 AND(SILICA OR CELLULOSE) (5A) (CARRIER OR SUPPORT? OR SUBSTRATE)

L5 2 S L3 AND(TRIMETHYLALUMINUM OR TRIETHYLALUMINUM OR TRIETHYLGALLIUM OR TRIMETHYLGALLIUM OR TRIMETHYLINDIUM OR TUNGSTEN HEXAFLUORIDE)

L6 9 S L3 AND ORGANOMETAL?

L7 13 S L3(10A) (GAS OR GASEOUS OR VAPOR? OR VOLATIL? OR SEMIVOLATIL?)

L8 121 S L3 AND(DRAGER OR DRAEGER OR ANALYSIS) (3A) REAGENT

L9 37 S L4-7

L10 119 S L3 AND(DRAGER OR DRAEGER OR ANALYSIS) (3A) (TUBE OR ELEMENT OR TAPE OR PAPER OR COLUMN)

L11 232 S L8,L10 NOT L9

L12 204 S L11 AND PY<2004

=> d bib,ab,kwic 19 1-37

L9 ANSWER 10 OF 37 CA COPYRIGHT 2007 ACS on STN

AN 138:78597 CA

TI Determination of zinc (II) in pharmaceuticals based on a flow-through

bulk optode

AU Albero, M. I.; Ortuno, J. A.; Garcia, M. S.; Sanchez-Pedreno, C.;
Exposito, R.

CS Faculty of Chemistry, Department of Analytical Chemistry, University of
Murcia, Murcia, 30071, Spain

SO Journal of Pharmaceutical and Biomedical Analysis (2002), 29(5), 779-786

AB A method based on flow injection (FI), was applied for the detn. of Zn
(II) using a flow-through bulk optode membrane that incorporates 1-(2-**pyridylazo**)-2-naphthol in a plasticized poly (vinyl chloride) membrane
entrapped in a **cellulose support**. The calibration graph plotting the
reflectance at 562 nm vs. [Zn (II)] was linear in the range 0.16-3.27 mg
l⁻¹ (2.5×10⁻⁶-5×10⁻⁵ M) with a detection limit of 0.10 mg l⁻¹. The
variation coeffs. of the sensor response for 0.33 mg l⁻¹ of Zn (II) were
±0.11% for consecutive measurements (n=10), ±0.19% between days (n=5)
and ±0.22% between different membranes (n=6). The sensor can be readily
regenerated with the same acetic/acetate carrier of pH 3.9. The FI
method proposed was applied to the detn. of zinc (II) in
pharmaceuticals.

L9 ANSWER 11 OF 37 CA COPYRIGHT 2007 ACS on STN

AN 137:14884 CA

TI Kinetic methods for the determination of cadmium(II) based on a flow-
through bulk optode

AU Sanchez-Pedreno, C.; Garcia, M. S.; Ortuno, J. A.; Albero, M. I.;
Exposito, R.

CS Faculty of Chemistry, Department of Analytical Chemistry, University of
Murcia, Murcia, 30071, Spain

SO Talanta (2002), 56(3), 481-489

AB Three kinetic methods based on flow injection, flow, and stopped-flow
injection were applied for the detn. of Cd(II) using a flow-through bulk
optode membrane that incorporates 1-(2-**pyridylazo**)-2-naphthol (PAN) in a
plasticized poly(vinyl) chloride membrane entrapped in a **cellulose
support**. The calibration graphs plotting the reflectance at 560 nm vs.
[Cd(II)]^{1/2} for the 1st two methods and vs. [Cd(II)] for the 3rd were
linear up to 56.2 mg L⁻¹. The detection limits of the methods were
0.01, 0.06 and 0.8 mg L⁻¹, resp. The FI method was selected for
application purposes. The variation coeff. of the sensor response for
11.2 mg L⁻¹ of Cd(II) was ±0.31 and ±0.65% between different membranes.
The sensor can be readily regenerated with a carrier (acetic-acetate)
buffer of pH 4. The FI method was applied to the detn. of Cd in an
alloy and in H₂O.

L9 ANSWER 12 OF 37 CA COPYRIGHT 2007 ACS on STN

AN 135:55049 CA

TI Development of a new flow-through bulk optode for the determination of
manganese(II)

AU Sanchez-Pedreno, C.; Garcia, M. S.; Ortuno, J. A.; Albero, M. I.;
Ballester, E.

CS Department of Analytical Chemistry, Faculty of Chemistry, University of
Murcia, Murcia, 30071, Spain

SO Fresenius' Journal of Analytical Chemistry (2001), 369(7-8), 680-683

- AB A flow-through bulk optode based on the use of 1-(2-**pyridylazo**)-2-naphthol (PAN) immobilized in a plasticized poly(vinyl chloride) membrane entrapped in a **cellulose support**, in conjunction with the flow injection anal. technique, is proposed for the detn. of manganese(II). The calibration graph obtained at 570 nm was linear in the range 0.27-27.5 mg L⁻¹ (5×10^{-6} - 5×10^{-4} M) Mn(II) with a detection limit of 0.18 mg L⁻¹. The coeffs. of variation of the sensor response for 5.5 mg L⁻¹ of Mn(II) were $\pm 0.22\%$ for consecutive measurements ($n = 10$), $\pm 0.48\%$ between days ($n = 5$) and $\pm 0.38\%$ between different membranes ($n = 6$). The sensor was readily regenerated with the carrier acetic acid/acetate buffer of pH 4.5. The method was applied to the detn. of manganese in steels, waters and lemon tree leaves.
- L9 ANSWER 14 OF 37 CA COPYRIGHT 2007 ACS on STN
 AN 133:79488 CA
 TI Development of a new bulk optode membrane for the determination of mercury(II)
 AU Sanchez-Pedreno, C.; Ortuno, J. A.; Albero, M. I.; Garcia, M. S.; Valero, M. V.
 CS Faculty of Chemistry, Department of Analytical Chemistry, University of Murcia, Murcia, 30071, Spain
 SO Analytica Chimica Acta (2000), 414(1-2), 195-203
 AB A new procedure for constructing an optical fiber reflectance sensor of the bulk optode membrane type was presented. The optode membrane consists of a plasticized poly(vinyl chloride) (PVC) membrane in which the ionophore is dissolved, entrapped in a **cellulose support**. The new optode with the metallochromic indicator, 1-(2-**pyridylazo**)-2-naphthol (PAN), was incorporated into a newly designed flow-through cell and the injection system was optimized for the detn. of Hg(II) at 560 nm in the range 2-200 mg l⁻¹ (10^{-5} - 10^{-3} M) with a detection limit of 0.11 mg l⁻¹ Hg(II). The coeffs. of variation of the sensor response for 10 and 40 mg l⁻¹ of Hg(II) were ± 2.57 and $\pm 0.88\%$, resp., and the CV between four membranes was $\pm 3.5\%$. The sensor can readily be regenerated with the carrier, potassium bromide soln. The optode is fully reversible. The method was applied to the detn. of mercury in an alloy for dental prosthesis and to the indirect detn. of sulfite in aq. solns.
- L9 ANSWER 15 OF 37 CA COPYRIGHT 2007 ACS on STN
 AN 133:67920 CA
 TI A new procedure for the construction of flow-through optodes. Application to determination of copper (II)
 AU Sanchez-Pedreno, C.; Ortuno, J. A.; Albero, M. I.; Garcia, M. S.; De las Bayonas, J. C. Garcia
 CS Department of Analytical Chemistry, Faculty of Chemistry, University of Murcia, Murcia, 30071, Spain
 SO Fresenius' Journal of Analytical Chemistry (2000), 366(8), 811-815
 AB A new procedure for constructing an optical fiber reflectance, bulk optode membrane type, sensor is presented. The optode membrane consists of a plasticized poly(vinyl chloride) membrane in which the ionophore is dissolved, entrapped in a **cellulose support**. The new optode with the

dye indicator 1-(2-**pyridylazo**)-2-naphthol (PAN) was incorporated in a new flow-through cell and the injection system was optimized to det. Cu (II) at 567 nm in the range 5×10^{-5} - 10^{-3} M. The response was reproducible and the optode can be regenerated using 10^{-2} M EDTA followed by H₂O. The method was applied to the detn. of Cu in real samples.

L9 ANSWER 16 OF 37 CA COPYRIGHT 2007 ACS on STN
AN 129:22629 CA
TI Diffuse reflection spectroscopy of indium sorbates with immobilized heterocyclic azo compounds
AU Ershova, Natalija I.; Ivanov, Vadim M.
CS Moscow State Institute of Radiotechnology, Electron. Automatics, Moscow, 117454, Russia
SO Analytica Chimica Acta (1998), 364(1-3), 235-241
AB Diffuse reflection was used for the direct detn. of indium after preconcn. on a solid support. The best conditions were found for sorption of indium complexes with 1-(2-**pyridylazo**)-2-naphthol (PAN), 4-(2-**pyridylazo**)resorcinol (PAR) and 2-(5-bromo-2-**pyridylazo**)-5-diethylaminophenol (5-Br-PADAP) immobilized on a silica gel Silochrom S-120. Optical characteristics of the complexes in solns. and on sorbent are practically the same for the variations of the Gurevich-Kubelka-Munk function, color lightness and chromaticity coordinates. The linear solns. of variations of these quantities with the indium contents were detd. 4 µg indium could be concd. on 0.3 g modified silica gel with immobilized 5-Br-PADAP from a sample vol. of 200 mL with an enrichment factor exceeding 600.

L9 ANSWER 18 OF 37 CA COPYRIGHT 2007 ACS on STN
AN 125:203935 CA
TI Comparison of the chelating ion exchange properties of dye coated **cellulose** and polystyrene **substrates** for the separation and determination of trace metals from aqueous media
AU Sutton, R. M. C.; Hill, S. J.; Jones, P.
CS Department of Environmental Sciences, University of Plymouth, Drakes Circus, Plymouth, Devon, PL4 8AA, UK
SO Journal of Chromatography, A (1996), 739(1 + 2), 81-86
AB The following paper describes the comparison of a no. of dye impregnated polystyrene resins and dye coated cellulose for the chelating ion exchange of metal ions. Dye loadings, capacity factors, metal adsorption capacity and selectivities were measured. The **cellulose substrate** has a strong affinity for copper but had a very low capacity. Of the polystyrene resins, highly cross-linked macronets gave the highest metal adsorption capacities. For one of the resins, an example of a sepn. of a synthetic mixt. of alk. earth metals in high ionic strength media is described.

L9 ANSWER 33 OF 37 CA COPYRIGHT 2007 ACS on STN
AN 81:57954 CA
OREF 81:9185a,9188a
TI Permanent fixing of metal-specific indicator groups onto a carrier substance

IN Laine, Jaakko E.; Sjostrom, Eero V.
 PA Orion-Yhtyma Oy
 SO Ger. Offen., 15 pp.
 PI DE 2333009 A1 19740131 DE 1973-2333009 19730628
 GB 1429373 A 19760324 GB 1973-30297 19730626
 PRAI FI 1972-1858 A 19720629

AB Metal-indicating azo dyes (pyridine and thiazole derivs.) contg. ≥ 2 OH groups are chem. bonded to a **carrier**, preferably **cellulose**, at a pH at which only 1 OH group participates in the bonding, leaving the other OH group free for chelation. The bonding group between the cellulose and the dye is a s-triazine derived from cyanuric chloride (I). The s-triazine ring in the product can be stabilized by treatment with an amine, e.g. PhNH₂, piperidine, ethylenediamine, or NH₃. As an example, 4-(2-**pyridylazo**)resorcinol (II) was bonded at pH 8 to finely ground cellulose fibers pretreated with I at pH 12. The amt. of II bonded was increased to 34 mg/g fiber by using 1,4-diazabicyclo-[2.2.2]-octane as catalyst. The metal indicator-bonded carrier can be used in columns or in the form of paper strips, powders, membranes, or gels for quant. anal., chromatog., and complexometric titrns.

=> d bib,ab,kwic 112 1-204

L12 ANSWER 24 OF 204 CA COPYRIGHT 2007 ACS on STN
 AN 130:356740 CA
 TI Immobilized reagents for optical heavy metal ions sensing
 AU Malcik, N.; Oktar, O.; Ozser, M. E.; Caglar, P.; Bushby, L.; Vaughan, A.; Kuswandi, B.; Narayanaswamy, R.
 CS Department of Chemistry, Hacettepe University, Beytepe, Ankara, 06532, Turk.
 SO Sensors and Actuators, B: Chemical (1998), B53(3), 211-221
 AB Many ligands such as 1-nitroso-2-naphthol, 4-(2-**pyridylazo**)resorcinol, 2,4-dinitrosoresorcinol and 1-(2-**pyridylazo**)-2-naphthol were studied in the development of optical sensors for heavy metal ions (Co²⁺, Cu²⁺, Ni²⁺, Fe³⁺, Cd²⁺, Zn²⁺, Pb²⁺ and Hg²⁺) in aquatic environments. The reagents immobilized by phys. adsorption onto polymeric materials such as XAD-4, XAD-7 and Dowex ion-exchange resins, exhibited chromic characteristics in the absence and presence of metal ions. Reflectance measurements were used. Parameters such as pH, measurement wavelength and reagent concn. were optimized for a given metal ion, and the reversibility/regenerability characteristics of the sensing reagent were studied together with the limit of detection and the concn. range producing linear response for the metal ion.

L12 ANSWER 30 OF 204 CA COPYRIGHT 2007 ACS on STN
 AN 129:35828 CA
 TI New sorbents and indicator powders for preconcentration and determination of trace metals in liquid samples
 AU Morosanov, E.; Velikorodny, A.; Zolotov, Yu.
 CS Anal. Chem. Div., Chem. Dep, Lomonosov Moscow State Univ., Moscow, 119899, Russia
 SO Fresenius' Journal of Analytical Chemistry (1998), 361(3), 305-308
 AB Two approaches to immobilize complex-forming **anal. reagents** (PAN, PAR, xylenol orange, bromobenzthiazo, crystal violet, Cadion, and

sulfochlorophenolazorhodanine) for the prepn. of new sorbents and indicator powders are suggested: online coating of reversed-phase silica gel by reagents or doping of porous sol-gel silica with reagents. The retention of Ag, Cd, Cu(II), Co(II), Fe(III), Mn(II), Pb, and Zn by the sorbents was investigated. Quant. sorption and desorption conditions were optimized. Procedures for the detn. of Cd, Cu(II), Fe(III), Pb, and Zn with flame at. absorption, spectrophotometric, and diffusion scattering spectrometric detection were elaborated. Detection limits for Cd, Cu(II), Fe(III), Pb, and Zn were 3, 6, 5, 40, and 1 µg/L, resp. The procedures were used for the anal. of various real samples, e.g., natural and wastewaters, and food.

L12 ANSWER 38 OF 204 CA COPYRIGHT 2007 ACS on STN

AN 127:8839 CA

TI Length-of-stain indicator tubes for the determination of metals in water solutions

AU Morosanova, E. I.; Kuz'min, N. M.; Zolotov, Yu. A.

CS Department Chemistry, Lomonosov Moscow State University, Moscow, 119899, Russia

SO Fresenius' Journal of Analytical Chemistry (1997), 357(7), 853-859

AB Indicator tubes were proposed for the detn. of heavy metals in solns. Prepn. procedures for indicator powders based on non-covalent modifications of reversed-phased silica gel sorbents by **anal. reagents** were developed. The effects of pH of the sample, the capacity of the sorbent on the reagent, the flow rate, and the diam. of an indicator tube on the length of the colored zone were studied. Procedures for the detn. of Co²⁺, Fe²⁺, Fe³⁺, Cu²⁺, Cd²⁺, Pb²⁺, and the total content of heavy metals in water and solns. were elaborated. The procedures were used to analyze natural and wastewaters, soil exts., and industrial solns.

L12 ANSWER 62 OF 204 CA COPYRIGHT 2007 ACS on STN

AN 123:101617 CA

TI Online coated columns for the spectrophotometric determination of metals by continuous flow analysis

AU Zolotov, Yuri A.; Maksimova, Irina M.; Morosanova, Elena I.; Velikorodny, Andrei A.

CS Analytical Chemistry Division, Chemistry Department, Lomonosov Moscow State University, Moscow 119899, GSP-3, Russia

SO Analytica Chimica Acta (1995), 308(1-3), 378-85

AB The immobilization of xylenol orange, 1-(2'-**pyridylazo**)-2-naphthol and (p-sulfophenylazo)-2'-sulfo-4'-nitrodiazoaminobenzene disodium salt

(Cadion) on reversed-phase silica (C16, C8, Ph, C1, C≡N) and capillary tubes with a hydrophobic inner surface (C6, C-Ph, C1) in the flow were studied. The flow system including a microcolumn or a capillary tube for the detn. of metal ions is suggested. Its versatility and flexibility is provided by online coating of the sorbents or inner surface of the capillary tubes. The procedures for the flow

spectrophotometric detn. of Cd, Co, Cu and Fe(III) in the range 8×10^{-8} - 3×10^{-5} M with online preconcn. are suggested. The preconcn. factors are up to 9 for the microcolumns and up to 19 for the capillary tubes.

The throughput of the system is 19 samples per h. The method of simultaneous detn. of two metals in the mixt. (Cu(II) and Co(II), Co(II) and Fe(III), Fe(III) and Zn, Mn(II) and Pb(II)) in the range 1×10^{-6} - 7×10^{-5} M at 30-60 samples per h is developed.

L12 ANSWER 66 OF 204 CA COPYRIGHT 2007 ACS on STN
AN 122:204030 CA
TI Linear colorimetric determination of copper(II) and iron(III) by using noncovalently immobilized reagents
AU Maksimova, I. M.; Morosanova, E. I.; Kukhto, A. A.; Kuz'min, N. M.; Zolotov, Yu. A.
CS Moscow State University, Moscow, 119899, Russia
SO Zhurnal Analiticheskoi Khimii (1994), 49(11), 1210-14
LA Russian
AB A linear colorimetric method was developed for the detn. of copper(II) and iron(III) in solns. using 1-(2-pyridylazo)-2-naphthol and Xylenol Orange noncovalently immobilized on hydrophobic silica gels Diasorb-C16 and Diasorb-Fenil as indicator powders. The method is simple and rapid, it allows the copper(II) and iron(III) ions to be detd. in the presence of considerable amts. of assoc. ions. The possibility is demonstrated of the sep. simultaneous detn. of Cu(II) and Co(II) ions in one sample using an indicator tube filled with silica gel Diasorb-Fenil modified with 1-(2-pyridylazo)-2-naphthol. This method can be applied to the detn. of copper(II) in wastewater and industrial solns. and to the detn. of iron(II) in soil exts. The performance characteristics of the developed procedures are comparable with those of conventional instrumental methods.

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STN INTERNATIONAL LOGOFF AT 17:56:46 ON 27 DEC 2007